

AMENDMENT

In the claims:

Please cancel claims 1-14 and 21-32 without prejudice or disclaimer and please add new claims 33-51 as set forth in the complete listing of the claims hereafter. This complete listing of the claims replaces previous claim listings.

1-32 (Cancelled)

33. (New) A method for detecting the presence or absence of cell fusion, which comprises:

contacting a system comprising a first cell with a second cell, wherein:

the first cell comprises a first reporter molecule fragment and a viral envelope protein;

the second cell comprises a second reporter molecule fragment and a viral envelope protein receptor capable of binding to the viral envelope protein of the first cell;

the first cell is a HeLa cell and the second cell is a 293T cell, or the first cell is a 293T cell and the second cell is a HeLa cell;

the first reporter molecule fragment and the second reporter molecule fragment combine to form a functional reporter molecule upon fusion of the first cell with the second cell; and

detecting the presence or absence of a signal produced by the functional reporter molecule, whereby the presence of cell fusion is detected by the presence of a signal and the absence of cell fusion is detected by the absence of a signal.

34. (New) The method of claim 33, wherein the first reporter molecule fragment and the second reporter molecule fragment are independently selected from an α -fragment of β -galactosidase and an Ω -fragment of β -galactosidase.

35. (New) The method of claim 33, wherein the second cell further comprises a viral envelope co-receptor protein.

36. (New) The method of claim 35, wherein the viral envelope protein is HIV gp160, the viral envelope protein receptor is CD4, and the viral envelope protein co-receptor is CCR5.

37. (New) The method of claim 36, wherein the first cell further comprises HIV rev.
38. (New) The method of claim 35, wherein the viral envelope protein is HIV gp160, the viral envelope protein receptor is CD4, and the viral envelope protein co-receptor is CXCR4.
39. (New) The method of claim 38, wherein the first cell further comprises HIV rev.
40. (New) The method of claim 33, wherein the viral envelope protein is selected from the group consisting of HIV gp160, Ebola GP, HTLV SU, and influenza HA.
41. (New) The method of claim 33, wherein the signal is chemiluminescent.
42. (New) The method of claim 33, wherein the viral envelope protein is exogenously expressed.
43. (New) The method of claim 33, wherein the viral envelope protein receptor is exogenously expressed.
44. (New) The method of claim 33, wherein the viral envelope protein is endogenously expressed.
45. (New) The method of claim 33, wherein the viral envelope protein receptor is endogenously expressed.
46. (New) The method of claim 33, wherein the system comprises a molecule that inhibits cell fusion.
47. (New) The method of claim 33, wherein one of the first and second reporter molecule fragment comprises a fragment of beta-galactosidase consisting essentially of an N-terminal alpha region of beta-galactosidase.
48. (New) The method of claim 47, wherein the N-terminal alpha region of beta-galactosidase spans about amino acid 1 to about amino acid 100.
49. (New) The method of claim 47, wherein the N-terminal alpha region of beta-galactosidase spans about amino acid 1 to about amino acid 85.

50. (New) The method of claim 33, wherein one of the first and second reporter molecule fragment lacks a functional N-terminal alpha region of beta galactosidase.

51. (New) The method of claim 50, wherein one of the first and second reporter molecule fragment lacks a region spanning about amino acid 10 to about amino acid 37.